IN THE CLAIMS:

Please amend the claims as follows:

1. (currently amended) A method for producing an optical element with at least one curved surface by spherical separation from a basic body with a spherical ~~cap-like~~ separating body with cutting elements, comprising the steps of moving said separating body ~~being moved~~ through said basic body or moving said basic body ~~being moved~~ through said separating body, while at the same time rotating ~~a relative rotational movement takes place between~~ said basic body ~~and~~ about said separating body or said separating body about said basic body with a rotating axis which passes through ~~the~~ a center point, ~~(M) of the pivoting movement~~ said basic body being accommodated in a receptacle further including the step of arranging the cutting element on the circumference of said separating body and providing a vibration damping to said separating body.

2. (currently amended) The method as claimed in claim 1, wherein said spherical ~~cap-like~~ separating body rotates during ~~the~~ a separating cut.

3. (currently amended) The method as claimed in claim 1, wherein said basic body rotates during ~~the~~ a separating cut.

4. (original) The method as claimed in claim 1, wherein at least two optical blanks for the optical element are removed from said basic body in such a way that a concave side of a first optical element and a convex side of a second optical element are formed simultaneously by a single separating cut.

5. (original) The method as claimed in claim 4, wherein lenses are produced as optical elements.

6. (original) The method as claimed in claim 5, wherein lenses are produced from quartz glass for projection lenses or lighting optics in microlithography.

7. (original) The method as claimed in claim 5 wherein lenses are produced from crystals, such as calcium fluoride, barium chloride, magnesium fluoride or lithium fluoride, for projection

lenses or lighting optics in microlithography.

8. (currently amended) A method for producing a lens for projection lenses or lighting optics in microlithography from quartz glass, comprising providing ~~with~~ at least one curved surface by spherical separation from a basic body with a spherical-~~cap-like~~ separating body with cutting elements on a periphery thereof, moving said separating body ~~being moved~~ through said basic body or moving said basic body ~~being moved~~ through said separating body, while at the same time producing a relative rotational movement ~~takes place~~ between said basic body and said separating body with a rotating axis which passes through ~~the~~a center point ~~(M) of the pivoting movement~~ and providing said basic body with two optical blanks for lenses so that a concave side of a first lens and convex side of a second lens may be produced simultaneously.

9. (currently amended) The method as claimed in claim 8, wherein said spherical-~~cap-like~~ separating body rotates during ~~the~~a separating cut.

10. (currently amended) The method as claimed in claim 8, wherein said basic body rotates during ~~the~~a separating cut.

11. (cancelled) The method as claimed in claim 8, wherein at least two optical blanks for the optical element are removed from said basic body in such a way that a concave side of a lens and a convex side of a lens are formed simultaneously by a single separating cut.

12. (currently amended) A device for producing ~~an~~ optical ~~element~~lenses with at least one curved surface from a basic body, ~~with~~having a spherical-cap-like separating body with a partial spherical shell in the form of a bell and ~~with~~ cutting elements, said separating body or said basic body being pivotable around a pivoting axis with a curvature about a pivoting point ~~(M)~~ which corresponds to ~~the~~a curvature of ~~the~~a separating cut to be introduced into said basic body, ~~and~~ said basic body being accommodated in at least one receptacle~~.~~, wherein the basic body holds at least two optical blanks for lenses so that a concave side of a first lens and a convex side of a second lens can be produced simultaneously by the separating cut and said cutting elements are arranged on the outer circumference of the partial-spherical shell.

13. (original) The device as claimed in claim 12, wherein said basic body is accommodated rotatably around its longitudinal axis in at least one receptacle.

14. (currently amended) The device as claimed in claim 12, wherein said separating body is provided with a drive device, with a rotating axis which passes through ~~the~~a center point ~~(M)~~ of the pivoting movement.

15. (cancelled) The device as claimed in claim 12, wherein the optical elements to be produced are lenses, said spherical-cap-like separating body having a part-spherical shell and it being possible to remove from the basic body at least two optical blanks for lenses in such a way that a concave side of a first lens and a convex side of a second lens can be produced simultaneously by the separating cut.

16. (cancelled) The device as claimed in claim 15, wherein said separating body has a part-spherical shell in at least approximately the form of a bell, said cutting elements being arranged on the outer circumference of the part-spherical shell.

17. (currently amended) The device as claimed in claim 12, wherein said separating body has a ~~part~~partial-spherical shell, which is provided in the region of the pivoting axis of said separating body with a bore in which said basic body can be accommodated with its receptacle, and wherein said ~~part~~partial-spherical shell is held on its outer circumferential wall on said separating body by means of a holding device, said cutting elements being arranged on the inner circumference of said ~~part~~partial-spherical shell.

18. (currently amended) The device as claimed in claim 17, wherein the holding device for the ~~part~~partial-spherical shell has a clamping device, detachably connecting said ~~part~~partial-spherical shell to said separating body.

19. (currently amended) The device as claimed in claim 18, wherein the region of said separating body with which said ~~part~~partial-spherical shell is connected via said clamping device is formed at least approximately as a cylindrical housing.

20. (currently amended) The device as claimed in claim 19, wherein said cylindrical housing is

supported by a rotary bearing on a fixed device ~~fixed to the machine~~.

21. (original) The device as claimed in claim 19, wherein said cylindrical housing is provided with damping elements.

22. (currently amended) The device as claimed in claim 17, wherein said ~~part~~partial-spherical shell is provided with damping elements.

23. (currently amended) The device as claimed in claim 22, wherein one or more damping elements are integrated into said ~~part~~partial-spherical shell or connected to it.

24. (currently amended) The device as claimed in claim 23, wherein said damping elements are arranged on one or both sides of the ~~part~~partial-spherical shell.

25. (currently amended) The device as claimed in claim 24, wherein said damping elements are arranged displaceably in the radial direction on said ~~part~~partial-spherical shell.

26. (currently amended) The device as claimed in claim 25, wherein said damping elements are displaceable individually under open-loop or closed-loop control by sensors which pick up vibrations of said ~~part~~partial-spherical shell.

27. (original) The device as claimed in claim 12, wherein said basic body is accommodated at both ends in receptacles pneumatically, mechanically, hydraulically or magnetically.

28. (currently amended) The device as claimed in claim 27, wherein one of said ~~two~~ receptacles is provided with a rotary drive device and ~~the~~another receptacle is provided with a follower device.

29. (currently amended) The device as claimed in claim 27, wherein said receptacles are displaceable in the direction of the rotating axis, which passes through the ~~center~~pivoting point ~~(M) of the pivoting movement~~.

30. (currently amended) The device as claimed in claim 12, wherein said basic body is under an axial tensile force in the at least one receptacle in a clamped state during ~~the~~a separating cut.

31. (currently amended) The device as claimed in claim 12, wherein said separating body ~~with its cutting elements arranged on the circumference of said separating body~~ has a vibration-damping construction.

32. (original) The device as claimed in claim 12, wherein said separating body is divided into two or more parts.

33. (original) The device as claimed in claim 12, wherein said separating body is provided on at least one of its surfaces with depressions.

34. (original) The device as claimed in claim 33, wherein said depressions are formed as grooves.

35. (original) The device as claimed in claim 33, wherein said depressions pass completely through said separating body.

36. (original) The device as claimed in claim 34, wherein said grooves are distributed irregularly over said separating body.

37. (original) The device as claimed in claim 34, wherein said grooves are provided for transporting flushing fluid to said cutting elements.

38. (original) The device as claimed in claim 12, wherein said cutting elements are arranged irregularly on said separating body.

39. (currently amended) The device as claimed in claim 12, wherein said cutting elements are formed in a wedge-shaped manner in cross section, the wider side of the wedge being located on ~~the outside~~ an other periphery of said spherical separating body.

40. (original) The device as claimed in claim 12, wherein said separating body is provided with clearances or bores in its circumferential wall.

41. (currently amended) A device for producing lenses from quartz glass for projection optics and lighting optics in microlithography with at least one curved surface from a basic body, with a spherical-~~cap-like~~ separating body having a partial spherical shell and cutting elements on the outer periphery of the partial spherical shell~~with cutting elements~~, said separating body or said basic body being pivotable around a pivoting axis with a curvature about a pivoting point ~~(M)~~ which corresponds to the curvature of ~~the~~a separating cut to be introduced into said basic body, and said basic body being accommodated in at least one receptacle~~.~~, the basic body having at least two optical blanks for lenses so that a concave side of a first lens and a convex side of a second lens can be produced simultaneously.

42. (original) The device as claimed in claim 41, wherein said basic body is accommodated rotatably around its longitudinal axis in at least one receptacle.

43. (currently amended) The device as claimed in claim 41, wherein said separating body is provided with a drive device, with a rotating axis which passes through ~~the~~a center point ~~(M) of the pivoting movement~~.

44. (cancelled) The device as claimed in claim 41, wherein said spherical-cap-like separating body having a part-spherical shell and it being possible to remove from the basic body at least two optical blanks for lenses in such a way that a concave side of a first lens and a convex side of a second lens can be produced simultaneously by the separating cut.

45. (new) A method of producing an optical element with at least one curved surface by spherical separation from a basic body with a spherical separating body with cutting elements comprising the steps of moving said separating body through said basic body or moving said basic body through said separating body, while at the same time rotating a said basic body about said separating body said separating body about said basic body with a rotating axis which passes through a center point, said basic body being accommodated in a receptacle further including the step of arranging the cutting elements irregularly on the circumference of said separating body and providing a vibration damping to said separating body.

46. (new) A method for producing an optical element with at least one curved surface by spherical

separation from a basic body with a spherical-cap-like separating body with cutting elements including the steps of moving said separating body through said basic body or moving said basic body through said separating body, while at the same time a relative rotational movement takes place between said basic body and said separating body with a rotating axis which passes through a center point, removing at least two optical blanks for the optical element from said basic body and forming a concave side of a first optical element and a convex side of a second optical element simultaneously by a single separating cut.

47. (new) A method for producing optical lenses providing said lenses with at least one curved surface by spherical separation from a basic body with a spherical-cap-like separating body with peripheral cutting elements, moving said separating body through said basic body or moving said basic body through said separating body, while at the same time producing a relative rotational movement between said basic body and said separating body with a rotating axis which passes through a center point wherein at least two optical blanks for the optical element are removed from said basic body in such a way that a concave side of a first optical element and a convex side of a second optical element are formed simultaneously by a single separating cut.

48. (new) A device for producing lenses with at least one curved surface from a basic body, with a spherical separating body with a partial spherical shell with cutting elements, said separating body or said basic body being pivotable around a pivoting axis with a curvature about a pivoting point which corresponds to a curvature of a separating cut to be introduced into said basic body, said basic body being accommodated at least one receptacle wherein the basic body holds at least two optical blanks for lenses in such a way that a concave side of a first lens and a convex side of a second lens can be removed and then produced simultaneously by a separating cut.

49. (new) A method of producing an optical element with at least one curved surface by spherical separation from a basic body with a spherical separating body with cutting elements comprising the steps of moving said separating body through said basic body or moving said basic body through said separating body, while at the same time rotating a said basic body about said separating body said separating body about said basic body with a rotating axis which passes through a center point, said basic body being accommodated in a receptacle further including the step of arranging the cutting elements irregularly on the circumference of said separating body

50. (new) A method of producing an optical element with at least one curved surface by spherical separation from a basic body with a spherical separating body with cutting elements comprising the steps of moving said separating body through said basic body or moving said basic body through said separating body, while at the same time rotating a said basic body about said separating body said separating body about said basic body with a rotating axis which passes through a center point, said basic body being accommodated in a receptacle further including the step of providing a vibration damping to said separating body.